

From owner-qrp-1@netcom.com Thu Feb 16 11:32:23 1995  
Message-Id: <9502161455.AA03306@us4rnc.pko.dec.com>  
Date: Thu, 16 Feb 95 09:55:16 EST  
From: "N100Q Tom R. @ MR01 16-Feb-1995 0936" <randolph@est.enet.dec.com>  
Subject: RE:

> What's the latest methods folks are using to drill, cut, and  
> otherwise mount LED's, pots, caps, and switches into their cases?

Dremel tool with various cutting bits. You can also use the Dremel to drill your pilot holes. For square holes, finish off the corners with a file. Don't bother trying this with steel - the Dremel isn't really powerful enough for anything beyond thin aluminum.

This is the one area of homebrew that I can't say I enjoy... too much like real work. Any hints on reducing that work would be appreciated!

BTW, a Dremel is also handy for carving out simple circuits on copperclad. I do most of my circuits "live bug" style (components right-side-up) on a grid of 1/4" pads cut with the Dremel.

Also BTW, too much newsgroup crapola in here lately with zero QRP content. I'm not sure, but I think I just read an ad for someone's mapping service?

-Tom R. N100Q randolph@est.enet.dec.com

From owner-qrp-1@netcom.com Thu Feb 16 01:12:16 1995  
Message-Id: <v01510104ab68221e6be8@[149.82.22.63]>  
Date: Wed, 15 Feb 1995 15:51:33 -0800  
From: xenolith@halcyon.com (Kevin Purcell)  
Subject: Re: 30 meters

>30-M is THE PERFECT BAND for a QRP group activity because QRO is limited  
>to 200W, because there aren't too many 'big guns' with Yagis, and because  
>30-M has little activity, while offering some good skip properties and is  
>open til after 20-M shutdown for the evening.

Another reason to adopt the "novice" bands (with their 200W limit) for QRP use!

Use it or loose it!

Kevin Purcell // work: kevinpu@atm.com // home: xenolith@halcyon.com // N7WIM  
Seattle dBug Mac Developers SIG organizer // "Go Sworokin! Put it to 'em"

From owner-qrp-1@netcom.com Thu Feb 16 01:15:22 1995

Date: Wed, 15 Feb 1995 16:10:29 -0330 (NST)  
From: Bob Gobrick V01DRB/WA6ERB <bgobrick@terra.nlnet.nf.ca>  
Subject: Re: 30 meters  
Message-Id: <Pine.OSF.3.91.950215160453.16896A-100000@terra.nlnet.nf.ca>

Alan,

I like that 30 something title for a 30 meter qrp-l outing. The title blends in with my late 60's roots and my socialistic attitudes (can't figure out why I just bought a new Index Labs QRP plus on that capitalistic inspired group purchase though...)

Anyway spring time is coming soon (I hope that's true since I'm getting cabin fever with all the snow lately) and what better way to make (have) a spring break then plan for a 30 meter qrp-l get together. Any volunteers to organize a little event once a month until spring really comes?

72 Bob V01DRB/WA6ERB

On Wed, 15 Feb 1995, Alan Kaul wrote:

> Hooray for a 30-M fox hunt AND ANY OTHER MASS ACTIVITY! The so-called  
> gentlemen's agreement to keep the WARC bands free of contests are just  
> fine for weekends when there are contests on the other bands. But I  
> don't think a 30-M QSO party or 30-M QRP group ''outing'' is unreasonable  
> on a weekend when there is no CQWW, no ARRL DX, no WPX, no All-Asian, etc.  
> 30-M is THE PERFECT BAND for a QRP group activity because QRO is limited  
> to 200W, because there aren't too many 'big guns' with Yagis, and because  
> 30-M has little activity, while offering some good skip properties and is  
> open til after 20-M shutdown for the evening.  
>  
> If the idea of a 30-M contest bothers anyone, let's get it another name.  
> The object is to get lotsa of QRP-er's on the band, AND for the ones on  
> the band to work as many others on the band as possible.  
>  
> Need a non-competitive name: call it 30-something! (It was a successful  
> title in its last outing).  
>  
> 72 de alan, w6rc1  
>  
> [[Alan Kaul, W6RCL](mailto:Alan Kaul, W6RCL)] [kaul@netcom.com](mailto:kaul@netcom.com)  
>  
>  
>  
>

-----

Robert J Gobrick V01DRB/WA6ERB

Internet: bgobrick@terra.nlnet.nf.ca  
rgobrick@public.compuserve.com

Compuserve: 70466.1405@compuserve.com

-----  
From owner-qrp-1@netcom.com Thu Feb 16 05:13:06 1995  
Date: 15 Feb 95 20:02:35 EST  
From: Craig LaBarge <74740.3166@compuserve.com>  
Subject: Re: 30 meters  
Message-Id: <950216010234\_74740.3166\_EHB146-2@CompuServe.COM>

Bob Gobrick, V01DRB, wrote:

> OK - what we need is some FOX hunt activity on 30 for the group - I think  
> this would be perfectly legal - it is not a contest - just an open net.  
> the problem is that 30 has been going quiet in the evening - the typical  
> fox hunt times, so what we need is maybe a weekend time or early evening  
> time. Anyway just some thoughts.

Yep! I agree, Bob. It would also be fun to just have some sort of QRP net up on 30. Or, perhaps, just a general QRP get together up there.

30 meters is about the only band where I can have an hour long 2-way QRP rag chew with a station half-way across the country without getting trashed by the big guns! It's a great place for QRPers to hang out!

73, Craig WB3GCK

P.S. Listen for me and the ol' rainspout somewhere near 10.116 weeknights from 2300Z - 2400Z.

From owner-qrp-1@netcom.com Thu Feb 16 14:27:43 1995  
Date: Thu, 16 Feb 1995 09:19:19 +0500  
From: teda@meaddata.com (Ted Albert)  
Message-Id: <9502161419.AA19516@rain.meaddata.com>  
Subject: Re: 30 meters

> Bob Gobrick, V01DRB, wrote:

>  
> > OK - what we need is some FOX hunt activity on 30 for the group - I think  
> > this would be perfectly legal - it is not a contest - just an open net.  
> > the problem is that 30 has been going quiet in the evening - the typical

> > fox hunt times, so what we need is maybe a weekend time or early evening  
> > time. Anyway just some thoughts.  
>  
> Yep! I agree, Bob. It would also be fun to just have some sort of QRP net up  
> on 30. Or, perhaps, just a general QRP get together up there.  
>  
> 30 meters is about the only band where I can have an hour long 2-way QRP rag  
> chew with a station half-way across the country without getting trashed by the  
> big guns! It's a great place for QRPers to hang out!  
>  
> 73, Craig WB3GCK  
>

Let me add that 17 meters is also a QRP haven. Check WU2J's CW/SSB xcvr in the latest edition of SPRAT.

73 de Ted, KF8EE

From owner-qrp-l@netcom.com Thu Feb 16 18:16:04 1995  
From: "Warren E. Lewis" <saswel@unx.sas.com>  
Message-Id: <199502161809.AA02706@cardamom.unx.sas.com>  
Subject: Re: 30 Meters  
Date: Thu, 16 Feb 1995 13:09:12 -0500 (EST)

Gang,

Made my first venture onto 30 Meters today (yesterday evening EST) around 0000Z. Heard K0EM calling CQ at about 10.108. Had a super ragchew with Don. Turned out he was just about 4 miles South of me (in Cary, NC also). He was running a Ramsey TX Kit at about 800 mW out and I was using my trusty Kenwood TS450 at 5 W. Had to run out right after I finished the contact with Don, so I don't know if there were any more good catches on our not. I think I will have to frequent 30 meters more often. Looking forward to running into some of the QRP List members on 30 Meters.

cheers - Warren

--

Warren E. Lewis  
Technical Support Division  
SAS Institute Inc.  
Cary, NC

saswel@unx.sas.com  
(919) 677-8001 x6542  
PP-ASEL  
AD4ZE DOD#0021

From owner-qrp-l@netcom.com Thu Feb 16 09:23:22 1995  
Message-Id: <9502151810.AA22350@us1rmc.bb.dec.com>  
Date: Wed, 15 Feb 95 13:10:57 EST

From: Bill Acito 15-Feb-1995 1304 <acito@asdg.enet.dec.com>  
Subject: <didn't both with a subject>

question for the group...

What's the latest methods folks are using to drill, cut, and otherwise mount LED's, pots, caps, and switches into their cases?

In other words, for those of us without a substantial metal shop in our basement, what items are out there besides a hand-drill and a set of bits?

e.g. -what do you use on large holes? pilot hole and a larger bit? punches?  
-how 'bout square holes? maybe a hole for a db9 or db25?

b

kc1gs/qrp qrp-ne #260

. . . . . - I own my own words - . . . . .

Bill Acito  
acito@asdg.enet.dec.com

|d|i|g|i|t|a|l|  
Hudson, MA

From owner-qrp-1@netcom.com Thu Feb 16 12:31:42 1995  
Message-Id: <199502161623.LAA22429@usc02.rfc.comm.harris.com>  
Date: Thu, 16 Feb 95 11:23:49 -0500  
From: "Chris Reich WB2DYJ" <cnr@rfc.comm.harris.com>  
Subject: <didn't bother with a subject>

A Dremel tool is the handiest tool you will ever own - drills, cuts, sands, polishes, engraves, grinds, reams. As the commercial says, it does everything but hammer - you just buy the appropriate bit. Available in hobby shops, hardware stores, discount department stores, and Sears.

Make the D-holes by drilling with a regular round bit first, then grind to fit with a reamer. I've done it. When done with patience, it looks pretty good.

Chris

cnr@usc02.rfc.comm.harris.com

>  
>       What's the latest methods folks are using to drill, cut, and  
>       otherwise mount LED's, pots, caps, and switches into their cases?  
>  
>       In other words, for those of us without a substantial metal shop  
>       in our basement, what items are out there besides a hand-drill and  
>       a set of bits?  
>  
>       e.g. -what do you use on large holes? pilot hole and a larger bit?  
>       punches?  
>       -how 'bout square holes? maybe a hole for a db9 or db25?  
>  
>  
>       Bill Acito                                                       |d|i|g|i|t|a|l|  
>       acito@asdg.enet.dec.com                                       Hudson, MA  
>  
>

From owner-qrp-l@netcom.com Thu Feb 16 18:26:00 1995  
From: wayne\_fretwell@MENTORG.COM (Wayne Fretwell)  
Subject: <didn't bother with a subject>  
Date: Thu, 16 Feb 1995 12:16:02 -0800  
Message-Id: <9502161216.ZM13550@python>

unsubscribe QRP-L

From owner-qrp-l@netcom.com Thu Feb 16 14:12:54 1995  
From: "RICHARD HIEBER" <SZ0026@daphne.rrze.uni-erlangen.de>  
Date: Thu, 16 Feb 1995 15:37:12 MET  
Subject: Announcement: QRP Clubs List (V0.96)  
Message-Id: <DE3EE06237@daphne.rrze.uni-erlangen.de>

Hi gang,

I am happy to announce that I just posted an updated and extended edition of the QRP Clubs List to the rec.radio.amateur.misc newsgroup on Usenet (see short excerpt below). This way the subscribers to QRP-L don't suffer from the relatively big posting (ca. 30 kB) and hopefully additional interest from the readers of r.r.a.misc is created. If somebody would like to get the file but can't read Netnews then he can get it directly from me via email.

                                          \\|//  
                                          (^ ^)  
+-----o00--( )--00o----+  
| Vy 72 de Richard (DL8MFQ @ DB0SIF.DEU.EU) in Erlangen |

+-----+  
alias AA8CP                    G-QRP #7417                    AGCW-DL #2168  
Internet: <sz0026@daphne.rrze.uni-erlangen.de>

-----

The QRP Clubs List  
Version 0.96  
February 15, 1995

Compiled by Richard Hieber, DL8MFQ/AA8CP.  
Email: <sz0026@daphne.rrze.uni-erlangen.de>  
Packet: [dl8mfq@db0sif.deu.eu]

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~Subject: The contents:  
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This file contains information about the following QRP clubs:

- o 9A-QRP Club
- o Arbeitsgemeinschaft CW / Activity Group Telegraphy (AGCW-DL)
- o QRP Club ARI
- o QRP Amateur Radio Club International (QRP ARCI)
- o Benelux-QRP Club
- o Grupo-QRP do Brasil
- o QRP Club of British Columbia (BC QRP)
- o QRP Society of Central Pennsylvania (QSCP)
- o Cleveland QRP Amateur Radio Club
- o Colorado QRP Club (CQC)
- o CW Operators QRP Club
- o EA QRP Club
- o EA8 QRP-DX Club
- o G-QRP Club (G-QRP-C)
- o Italian QRP Club (I QRP)
- o JA-QRP Club
- o MFJ 90's Radio Club
- o Michigan QRP Club (MI QRP, M-QRP)
- o The QRP Club of New England (NE QRP)
- o The QRP Club of Northern California (NorCal QRP)
- o NorthEastern Illinois QRP Society (NEIQS)
- o The NorthWest QRP Club (NW QRP)
- o NorthTexas QRP Club (NorTex, NQC)
- o OK QRP Club (from the Czech Republic)
- o Oklahoma QRP Club (OK QRP)
- o St. Louis QRP Society (SLQS)
- o U-QRP Club
- o WI QRP Club

o ZS-Algoa QRP Group

In addition to all that you'll also find information about defunct clubs and newsletters, ceased activities, 'unofficial' groups and a small paragraph about the world famous INET QRP Club ;-)

From owner-qrp-l@netcom.com Thu Feb 16 10:07:30 1995  
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)  
Subject: Re: ARCI/Internet  
Date: Wed, 15 Feb 95 16:08:36 EST5EDT  
Message-Id: <1995Feb15.160836.5309@wb3ffv.ampr.org>

Dave Benson is no longer the tech editor of the QRP Quarterly; it's now Ray Anderson, WB6TPU, raymonda@radium.eng.sun.com. The new "features editor", meaning non-technical articles, is Larry East, W1HUE, lve1@garnet.inel.gov. For what it's worth, I recruited them both for their positions, as well as recruiting NN1G as tech editor when I couldn't handle it any more. I guess that makes me the QRP Quarterly Recruiter :-). Right now, a significant problem with the Quarterly is the staggering amount of time it takes to put it together, ie, make up camera-ready copy to send to the printer. WB9TBU puts in staggering amounts of time doing that, and has been complaining privately about it for years. Now, however, things are getting serious and she will simply NOT be able to put the same amount of time into it in the future. We need people who can help a bit in that respect. I do have access to a laser printer and publishing software at work, and tried putting the latest W6TOY column on paper as camera-ready...and got an instant and deep respect for what Paula has been putting up with. Even after you have the hang of the software, it is not a simple process and takes a while to get everything to look good and fit. Multiply that by 40 pages and it's amazing she has any sanity left. If anyone would like to volunteer to do this sort of thing, ie, convert articles into laser printed, camera-ready text, and has lots of time, we'd like to know about it. Doesn't pay anything, but we might be able to arrange to get you free copies of the QRP Quarterly :-). 73 and Queue Our Pea DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-l@netcom.com Thu Feb 16 04:15:55 1995  
From: Byron8LCZ@aol.com  
Date: Thu, 16 Feb 1995 02:16:08 -0500  
Message-Id: <950215194727\_22634154@aol.com>



Subject: Re: Argonaut II Discontinued

Maybe they should re-release the Argonaut 515, add WARC bands, LCD readout and a SCAF audio filter, in place of the Argonaut 2.

72, Byron WA8LCZ

From owner-qrp-1@netcom.com Thu Feb 16 20:54:19 1995  
Date: Thu, 16 Feb 1995 14:06:28 -48000  
From: "David D. Meacham" <ddm@datatamers.com>  
Subject: Re: Argonaut II Discontinued  
Message-Id: <Pine.3.89.9502161455.B576-0100000@dt1.datatamers.com>

Byron, Yes, I think that would be a VERY nice rig. Let's talk it up!  
72, Dave, W6EMD

On Thu, 16 Feb 1995 Byron8LCZ@aol.com wrote:

> Maybe they should re-release the Argonaut 515, add WARC bands, LCD readout  
> and a SCAF audio filter, in place of the Argonaut 2.  
>  
> 72, Byron WA8LCZ  
>  
>  
>  
>

From owner-qrp-1@netcom.com Thu Feb 16 01:37:11 1995  
Date: Wed, 15 Feb 1995 19:44:42 -0600 (CST)  
From: Adrian Weiss W0RSP English Department <AWEISS@charlie.usd.edu>  
Message-Id: <950215194442.2e7ee@charlie.usd.edu>  
Subject: CALLSIGN LOOK-UP SERVERS

Hi all!

In addition to the one site noted, e.g.

telnet callsign.cs.buffalo.edu 2000

also:

telnet ns.risc.net (login = hamradio)

I tried these and they work.

73 ,Ade

From owner-qrp-1@netcom.com Thu Feb 16 18:30:08 1995  
Date: Thu, 16 Feb 1995 13:48:00 -0500  
From: "david (d.) burniston" <davidgb@bnr.ca>  
Message-Id: <"12275 Thu Feb 16 13:49:27 1995"@bnr.ca>  
Subject: Changes to Epiphyte

Hi All...

Having been pretty much unsuccessful at finding the ceramic filter for the Epiphyte, but having about 100 8MHz crystals, I'd like to modify the Epiphyte to use a 4 or 6 pole filter using the L pad input/output like the NORCAL40. I'll be characterizing the crystals soon and was planning on a 4.1 - 4.25 MHz VFO or VXO with an 8 MHz IF.

Is this plausible?

Thanks for any help...

... Dave

```
=====
Dave Burniston,          Bell Northern Research  Ottawa, ON Canada
VE3LFO                   ph.(613) 765-3579
NORCAL 434               *** All opinions are strictly my own. ***
=====
```

From owner-qrp-1@netcom.com Thu Feb 16 22:39:18 1995  
Subject: Re: Changes to Epiphyte  
Date: Thu, 16 Feb 1995 18:14:40 -0800  
From: Clark Savage Turner WA3JPG <turner@bear.ICS.UCI.EDU>  
Message-Id: <9502161814.aa06377@paris.ics.uci.edu>

Just a quick note: You can get the ceramic filter from the Kenwood TS 440 or the TS 940 and it will do just fine for the Epiphyte. That may be a source that will obviate the need to build something else, however, far be it for me to discourage some interesting modification!

Clark  
WA3JPG

From owner-qrp-1@netcom.com Fri Feb 17 00:04:43 1995  
Date: Thu, 16 Feb 1995 18:02:52 -0800 (PST)  
From: "John D. Spittle" <jds@freenet.vancouver.bc.ca>  
Subject: Re: Changes to Epiphyte  
Message-Id: <Pine.3.89.9502161710.A22238-01000000@freenet.vancouver.bc.ca>

On Thu, 16 Feb 1995, david (d.) burniston wrote:

> Hi All...

>

> Having been pretty much unsuccessful at finding the ceramic filter for  
> the Epiphyte, but having about 100 8MHz crystals, I'd like to modify the  
> Epiphyte to use a 4 or 6 pole filter using the L pad input/output like  
> the NORCAL40. I'll be characterizing the crystals soon and was planning  
> on a 4.1 - 4.25 MHz VFO or VXO with an 8 MHz IF.

>

> Is this plausible?

>

Yes, it's plausible. However, there is no way that you will get it on the the existing PCB. I would suggest that you await the forthcoming issue of QRPp. I understand that it will have a SSB transceiver with a 9MHz filter, plenty of space for modifications and separate Oscillator board by Bruce, VE7ZM. It uses 4 x NE602 mixers and is similar to the predecessor of the Epiphyte which used a 455KHz IF at that time.

The Epiphyte was designed specifically as a compact rig for portable operation and does not readily lend itself to modification.

As a matter of interest, I did substitute a 9MHz SSB filter in the Epiphyte - changing only the oscillator frequencies. It worked fine on transmit but the mismatch of the filter resulted in severe attenuation on receive. The MuRata 455 filter is a reasonably good match to the NE602 input & output (2000 ohms). 9MHz filters are generally around 500 ohms. By the time you've added matching transformers and/or an IF amplifier, a separate VFO etc., it's started to lose the original "simplicity"!

72 Derry VE7QK

From owner-qrp-l@netcom.com Thu Feb 16 03:06:58 1995

From: ab4el@cybernetics.net (Stephen Modena)

Message-Id: <9502160635.AA10539@cybernetics.net>

Subject: Communication Quarterly - Winter 1995

Date: Thu, 16 Feb 1995 01:35:27 -0500 (EST)

Alert! :^)

One of our fellow QRPers was published in the latest issue of Communication Quarterly -- Winter 1995

"Modeling and Understanding Small Beams: Part 1 - The X-Beam"

L.B. Cebik, W4RNL, CEBIK@utkvx.utk.edu

Pp. 33-50

L.B. also comments on the "beta-match" in the "Technical Conversations"... and perhaps this is of interest:

"Beyond the Z-Match: The IBZ Coupler"

Charles A. Lofgren, W6JJZ, clofgren@benson.claremont.edu

Pp. 27-32

(Which whom I've emailed before.)

Another item of possible interest:

"Connecting Computers to Radios: Adding DDS frequency control"

Howie Cahn, WB2CPU, wb2cpu@world.std.com

Pp. 9-22

What has this to do with QRP? (Aside from the fact that N1IST is cited for proof-reading?) Well, his Direct Digital Synthesis Unit is connected to a NN1G 40-40 transceiver board!

Then there is:

"A Low Power 20-Meter Transceiver"

Clint Bowman, W9GLW

Pp. 69-82

--

73/Steve/AB4EL ab4el@Cybernetics.NET in Raleigh, NC 35.81245N, 78.65849W

From owner-qrp-l@netcom.com Thu Feb 16 19:42:15 1995

From: PDouglas12@aol.com

Date: Thu, 16 Feb 1995 17:34:11 -0500

Message-Id: <950216144337\_23452704@aol.com>

Subject: Dayton Attendees

I am storing the messages which are posted from qrp-listers who expect to be at Dayton. I'll try to post a list of us in April. Meanwhile, someone must have the hospitality suite and qrp hotel base and where the group is eating etc. Please post. I don't see it in the Feb ham mags, nor in the Jan-Feb QQ, nor in the NE QRP. So who knows??? Preston WJ2V

From owner-qrp-l@netcom.com Thu Feb 16 01:15:21 1995

From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)

Subject: Dayton pictures for QRP Quarterly

Date: Wed, 15 Feb 95 15:51:30 EST5EDT

Message-Id: <1995Feb15.155130.5309@wb3ffv.ampr.org>

As always, "we" need someone to snap a few pictures at Dayton, of the QRP booths, well known QRPers, hospitality suite, rigs, etc, and submit them to the QRP Quarterly (and whatever other QRP journals are interested). It's always interesting to read an article about Dayton, especially if you weren't there. 73 and Queue Our Pea DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-l@netcom.com Thu Feb 16 14:47:57 1995  
Message-Id: <ab694b8b120210036ae1@[129.74.35.16]>  
Date: Thu, 16 Feb 1995 13:42:07 -0500  
From: Steve.Hideg.1@nd.edu (Steve Hideg)  
Subject: Re: Dayton pictures for QRP Quarterly

>As always, "we" need someone to snap a few pictures at Dayton, of the  
>QRP booths, well known QRPers, hospitality suite, rigs, etc, and submit  
>them to the QRP Quarterly (and whatever other QRP journals are  
>interested). It's always interesting to read an article about Dayton,  
>especially if you weren't there. 73 and Queue Our Pea DE WA8MCQ

I'll take pictures at whichever QRP events I attend. That'll probably be the hospitality room, the booths in the arenas, and perhaps a forum. I don't think I'll make the baquet, though.

--Steve

-----  
Steve Hideg Macintosh Consultant/Analyst

|                                     |                                                                          |
|-------------------------------------|--------------------------------------------------------------------------|
| Office of University Computing      | Telephone: (219) 631-EXAM                                                |
| G034 Computing Center/Math Building | E-mail: Steve.Hideg.1@nd.edu                                             |
| University of Notre Dame            | URL: <a href="http://www.nd.edu/~shideg/">http://www.nd.edu/~shideg/</a> |
| Notre Dame, IN 46556                | Ham Radio: N8HSC/9                                                       |

-----  
"Where the HELL is the Stage Manager?" -- Desiree Armfeldt

From owner-qrp-l@netcom.com Thu Feb 16 21:19:20 1995  
Date: Thu, 16 Feb 1995 14:02:16 -48000  
From: "David D. Meacham" <ddm@datatamers.com>

Subject: Re: Dayton pictures for QRP Quarterly  
Message-Id: <Pine.3.89.9502161449.A576-0100000@dt1.datatamers.com>

Mike, I'll try to remember to take my camera. I'll be at the Days Inn,  
South. 72, Dave, W6EMD

From owner-qrp-1@netcom.com Thu Feb 16 02:57:42 1995  
Date: Mon, 11 Jun 1990 23:22:20 +1030  
From: Chris Doherty <doherty@locrian.scranton.com>  
Subject: discounts, recounts and count outs  
Message-Id: <Pine.3.89.9006112227.C2669-0100000@locrian.scranton.com>

As an adult, I am responsible for my own actions and decisions. If I  
manufacture a product I must know what I need to "get" for my product in  
order to make a profit and stay in business. I must also understand  
accounting methods or at least, align myself with someone who does. These  
are my "actions". My decisions would be how to market my product and at  
what price. Do I want to sell one a day or twenty? What volume can I  
handle? What are my price advantages if I buy for 20 or 100 units of my  
product? I also understand that I am under no obligation to accept an  
offer to purchase my product at a discount. Before I obligate myself to  
that agreement, I must be sure that I can maintain my profit margins or  
make up for the decrease by increased cash flow through volume. It pays  
to move inventory. Obviously, any business that doesn't understand  
business goes out of business regardless of what they sell and for how  
much. I'm sure the folks at Index Labs are intelligent adults capable of  
sound actions and decisions. I have to trust to that. If I can save some  
money I will do it. And I hope they make some money - a win/win  
situation. If not, then perhaps they need to do more homework and I'm sure  
they will learn from their mistake. Remember, as long as there is a  
market, the product will be there. Well, so much for my 26 pfennigs.

\*\*\*\*\*

-73-

"I never want to be so down  
that it begins to look like up."

Chris Doherty  
doherty@lydian.scranton.com (sk)

\*\*\*\*\*

From owner-qrp-1@netcom.com Thu Feb 16 18:45:36 1995  
Date: Thu, 16 Feb 95 13:58:07 EST  
Message-Id: <9502161858.AA11506@clark.dgim.doc.ca>  
From: jcumming@clark.dgim.doc.ca (Jim Cummings)  
Subject: Re: Dremel Tools

Chris WB2DYJ said:

>A Dremel tool is the handiest tool you will ever own - drills, cuts,  
> sands, polishes, engraves, grinds, reams. As the commercial

> says, it does everything but hammer - you just buy the  
> appropriate bit. Available in hobby shops, hardware stores,  
> discount department stores, and Sears.  
>  
> Make the D-holes by drilling with a regular rountg bit first,  
> then grind to fit with a reamer. I've done it. When done with  
> patience, it looks pretty good.  
>  
> Chris  
> cnr@usc02.rfc.comm.harris.com  
>

If you get the drill stand, and some appropriate bits, drills neat holes for those homebrew printed circuit board projects

As an aside - my Dremel tool was a saviour for me this past summer when i was repairing an outside window frame that the previous owner of my residence had let rot and just painted over it. I was able to drill all the rot out in no time flat and really do a nice repair job. So they have other uses around the house as well.

=====  
Jim Cummings  
eMail:jcumming@clark.dgim.doc.ca  
packet:VE3XJ@VE3JF.#EONT.ON.CA.NOAM  
73 and live better digitally  
=====

From owner-qrp-1@netcom.com Thu Feb 16 12:31:41 1995  
Message-Id: <199502161621.AA24168@zia.aoc.nrao.edu>  
Date: Thu, 16 Feb 1995 09:21:07 -0700  
From: Paul Harden <pharden@aoc.nrao.edu>  
Subject: for scott.thomas@circellar

My email to scott.thomas@circellar.com keeps bouncing.  
Do you have an alternative path so I can resend the vfo info to you?

Paul Harden NA5N  
pharden@nrao.edu

From owner-qrp-1@netcom.com Thu Feb 16 23:27:27 1995  
Message-Id: <2f43296c.pandora@pandora.uucp>  
Date: Thu, 16 Feb 1995 18:31:07 +0800  
From: "W. Daniel, 9V1ZV" <pandora!daniel>  
Subject: Getting a Bencher

Hi Gang,

Sorry to raise an old ghost, but since I am trying to purchase a Bencher paddle, can anyone here please tell me just how much does one cost? Also, I would appreciate any comments on the performance of the paddle advertised by MFJ, which looks like a Bencher imitation.

Thanks.

73 de 9V1ZV Daniel

--

```
+-----+-----+
| Daniel Wee | daniel%pandora@lugs.po.my |
| 9V1ZV      | daniel.wee@f516.n600.z6.fidonet.org |
| UUCP1.12j  | Packet: 9V1ZV @ 9V1VS.SGP.AS -- |
+-----+-----+
```

From owner-qrp-l@netcom.com Thu Feb 16 01:15:24 1995  
From: jim.speer@whitelightbbs.com  
Subject: help please  
Message-Id: <MAIL.CC2@whitelightbbs.com>  
Date: Wed, 15 Feb 95 08:25:00 CST

Please excuse me for wasting bandwidth in this way, but I wonder if anyone can help me?

I am subscribed to this list, but not receiving it. I get automatic messages from majordomo, but no response from qrp-request or from the list.

I am communicating from a store-and-forward bulletin board, and I realize there might be some addressing problem, but that does not explain why I get all my other mail, but not qrp-l.

Can anyone help?

Thanks much.  
Jim Speer  
K5YUT  
cc: QRP-L, JSPEER

From owner-qrp-l@netcom.com Thu Feb 16 17:28:05 1995  
From: ARDAI@MAVEN.dnet.teradyne.com  
Date: Thu, 16 Feb 1995 10:47:27 -0500 (EST)  
Subject: Re: help please  
Message-Id: <01HN44K5TXCI00E8FY@A1GATE.TERADYNE.COM>

If you are having any difficulty with my lists, please send me mail at



nlist@netcom.com. That way, the other 477 people on the list don't get that message. Also, remember that if you bounce mail with a 'no such user' or 'host unknown' message, you will be removed from the list. This is to try to limit the 100-200 pieces of mail I get each day. Feel free to resubscribe when the problem is fixed. (Though in this user's case, the problem is on his end, since he is still on the list).

General reminder: To subscribe or unsubscribe from one of my lists, send mail to listserv@netcom.com with the body (not subject)

subscribe qrp-l or  
unsubscribe qrp-l or  
info qrp-l

List summary:

Summary for qrp-l.lst

|     |        |                  |
|-----|--------|------------------|
| 255 | com    | (USA)            |
| 94  | edu    | (USA)            |
| 28  | org    | (USA)            |
| 20  | net    | (USA)            |
| 17  | ca     | (Canada)         |
| 12  | gov    | (USA)            |
| 11  | uk     | (United Kingdom) |
| 8   | mil    | (USA)            |
| 4   | de     | (Germany)        |
| 4   | fi     | (Finland)        |
| 4   | us     | (USA)            |
| 2   | ch     | (Switzerland)    |
| 2   | es     | (Spain)          |
| 2   | nl     | (Netherlands)    |
| 2   | se     | (Sweden)         |
| 2   | za     | (South Africa)   |
| 1   | ar     | (Argentina)      |
| 1   | at     | (Austria)        |
| 1   | au     | (Australia)      |
| 1   | be     | (Belgium)        |
| 1   | bitnet | (USA)            |
| 1   | gb     | (United Kingdom) |
| 1   | ie     | (Ireland)        |
| 1   | my     | (Malaysia)       |
| 1   | pt     | (Portugal)       |
| 1   | sg     | (Singapore)      |
| 1   | th     | (Thailand)       |

qrp-l.lst: 422 US subscribers from 8 groups

qrp-l.lst: 56 foreign subscribers from 19 countries

qrp-l.lst: 478 subscribers in all

/mike  
n1list@netcom.com  
Maintainer, BARC lists

From owner-qrp-l@netcom.com Thu Feb 16 01:15:25 1995  
From: Michael Marmor <mmarmor@pluto.njcc.com>  
Message-Id: <199502160053.TAA06585@pluto.njcc.com>  
Subject: High-Efficiency LEDs  
Date: Wed, 15 Feb 1995 19:53:37 -0500 (EST)

> Did you know you can get so-called High-Efficiency LEDs that draw about one  
> fifth as much for the same light output? There are even "UltraBrights"  
> that draw still less (but in red only as far as I know).

> 73,  
> Wayne

I experimented with this recently after reading W1HUE's article  
in the latest QQ (page 25). I tested several types of LEDs I had  
in my junk box by varying the current from 0 to 20 mA at 12v.  
The best of the LEDs were quite bright at 1 to 2 mA! These  
were not special 'high-efficiency' LEDs, just the normal cheap  
kind.

73  
Michael, AA2UJ  
mmarmor@pluto.njcc.com

From owner-qrp-l@netcom.com Thu Feb 16 09:09:39 1995  
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)  
Subject: Re: HW-8 MODS  
Date: Wed, 15 Feb 95 23:27:23 EST5EDT  
Message-Id: <1995Feb15.232723.1442@wb3ffv.ampr.org>

As for removing turns from the coils in the 15M output network, I would  
not recommend that. It substantially reduces the harmonic suppression,  
according to computer simulations on Touchstone (an expensive  
engineering program at work). I put out a posting on this recently,  
and also have my article in the latest issue of 72 giving my side of  
this story. I have not yet measured my HW8 on a spectrum analyzer  
before and after pulling turns, as it needs other work to get it going,  
but will do it when I get it fixed. The variable in this equation is  
the amount of harmonic power at the final amp of the HW-8. Removing  
the turns definitely reduces harmonic attenuation, or so Touchstone  
says, I do not question its word. However, the only real requirement  
is that the output of any rig meet FCC requirements; if the harmonics  
are low to begin with, even reduced attenuation may still let the rig  
meet FCC specs. I "will" get my HW-8 fixed soon so I can do the tests.

73 and Queue Our Pea DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org  
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org  
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA  
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-1@netcom.com Thu Feb 16 21:47:12 1995  
From: Kirkekirk@aol.com  
Date: Thu, 16 Feb 1995 14:54:22 -0500  
Message-Id: <950216135720\_23411933@aol.com>  
Subject: HW-9 Wanted

Drop me a line if you have an HW-9 for sale.

From owner-qrp-1@netcom.com Thu Feb 16 03:18:26 1995  
From: ab4el@cybernetics.net (Stephen Modena)  
Message-Id: <9502160405.AA25276@cybernetics.net>  
Subject: I finally heard KF8EE :^)  
Date: Wed, 15 Feb 1995 23:04:25 -0500 (EST)

How the SSB QRP Fox Hunt sounded in Raleigh, NC tonight :^)

Oh my, oh my: the heterodynes on 40 M were unbelievable!  
I heard some brave QRO stations carrying on in one or two spots...  
but nary a sign of the Fox or any other QRPers.

In comparison, the 7.040+ segment sounded crisp and clean...should be  
fun tomorrow (Thur) night looking for the cw fox in PA. :^)

When I shifted to 75 M...several QSOs were in progress in the 3.780-7  
segment....then 3.784 cleared off and I decided to call to see if  
anyone was alive. :^) W03B Bob in MD and AA4YZ in OH sounded fine into  
here. WD8AAU in Dayton (home of the fox tonight) was concerned that he  
might be too close...so I wonder if you managed to work KF8EE after all?

Thought I heard N9DD calling me...but then I have a vivid imagination. :^)  
Then Scott NM1J in CT grabbed my attention.

After shifting to the 3.900-10 segment, the only hole appeared to be at  
3.905...but WB30 alerted me to listen higher for then Fox...and by some  
miracle, the QSO on 3.9075 evaporated after a few minutes and I heard Jim  
KC1FB in there...booming down here at S9+10 out of CT.

And then(!) I heard him: The Fox! Finally, I worked Ted KF8EE for the first  
time...meeting his expectation that we might manage it this time, having  
eluded each other several times on SSB and CW. :^)

Ted was up and down as I listened for the remainder of the final segment. I heard N1QPR persist and persist, trying to get the Fox to hear him. Finally, right as time was running out, they made the QSO. :^)

Indeed, 75 M seems to have been the band tonight! :^)

And for all of you who haven't given it a shot: it really is a challenge in a way quite different from the CW Fox Chase on 40. We'll be running again next week. Come have some fun with us.

--

73/Steve/AB4EL ab4el@Cybernetics.NET in Raleigh, NC 35.81245N, 78.65849W

From owner-qrp-l@netcom.com Thu Feb 16 10:57:37 1995  
Date: Thu, 16 Feb 1995 09:03:48 +0500  
From: teda@meaddata.com (Ted Albert)  
Message-Id: <9502161403.AA19470@rain.meaddata.com>  
Subject: Last night's Fox Hunt Results

Here are the comments first:

40 meters produced no contacts and I can still hear the heterodynes. For those who tried the 40 meter segments, I was on 7.228 and 7.219. There was no really clear spot on the first segment so I decided to stay on 7.228 and work with the Jones Filter on the Argonaut II. The second 40 meter segment would have been great on 7.214, but there was a roundtable there discussing boatanchors. I listened there for a minute or two and determined that the group was probably entrenched for the evening, so I moved to 7.219 and hoped for the best. :-)

75 meters was a similar story in the Advanced/Extra segment. I started on 3786, which was clear until several fellows started calling each other on top of me and proceeded with their QSO. Oh well, down to around 3784 and decided to squeeze in there, but the QRM was bad. I worked N9DD in South Bend, IN and heard AB4EL and other hounds calling each other, but could not get their attention. I moved at the top of the hour to 3.906, checked the frequency, and started calling. That segment was more productive. So here are the results:

|       |       |        |    |                                                                                                                                                                |
|-------|-------|--------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0254Z | 3.784 | N9DD   | 58 |                                                                                                                                                                |
| 0302Z | 3.906 | W03B   | 56 |                                                                                                                                                                |
| 0312Z | 3.906 | KC1FB  | 52 |                                                                                                                                                                |
| 0314Z | 3.906 | AB4EL  | 54 | Finally!                                                                                                                                                       |
| 0317Z | 3.906 | AA2PF  | 43 |                                                                                                                                                                |
| 0324Z | 3.906 | N1QR?R | 43 | We tried and tried but I could never get the suffix clearly. Seems he always peaked at the signal report<br>This station really tried - thanks for the effort. |

73 de Ted, KF8EE

From owner-qrp-l@netcom.com Thu Feb 16 22:44:23 1995  
Message-Id: <2f433e82.pandora@pandora.uucp>  
Date: Thu, 16 Feb 1995 20:01:05 +0800  
From: "W. Daniel, 9V1ZV" <pandora!daniel>  
Subject: List of calls on this list

Hi Gang,

I was just wondering if anyone maintains a list of calls subscribed to this list and their corresponding Internet addresses? I seem to recall that when this list started, we used to send in some information regarding our station, location, callsign etc. etc. Does anyone know what happened to that? And is there any interest in someone maintaining such a list?

73 de 9V1ZV Daniel

--

```
+-----+-----+
| Daniel Wee | daniel%pandora@lugs.po.my |
| 9V1ZV      | daniel.wee@f516.n600.z6.fidonet.org |
| UUCP1.12j  | Packet: 9V1ZV @ 9V1VS.SGP.AS -- |
+-----+-----+
```

From owner-qrp-l@netcom.com Thu Feb 16 10:13:23 1995  
Message-Id: <199502160029.AA20326@zia.aoc.nrao.edu>  
Date: Wed, 15 Feb 1995 17:29:02 -0700  
From: Paul Harden <pharden@aoc.nrao.edu>  
Subject: MFJ/QRP Rig Adjustment Notes

#### MFJ 90xx SERIES 5W QRP TRANSCEIVERS ADJUSTMENT NOTES

##### OVERALL OPINION.

The MFJ rig works as advertised with room to spare. This would hold true for any QRP rig using the same general circuit. The NE602/MC1350/NE602 scheme is an excellent 3-chip receiver with a sensitivity that rivals big rigs (~.2 to .3uV region). The XTALs used to filter the IF after the 1st NE602 is a must and does a good job with little attenuation. Peak the IF cans and you've got a very nice receiver.

The XMTR portion is about the same ... works great for its simplicity with good harmonic supression on the output. (Intermediate harmonics and images can be a bit ugly, but the final PA and output filtering cleans it right up). It is hard to misadjust the transmitter to exceed FCC specs for the -30dB down harmonic supression, EXCEPT FOR OVERDRIVING the transmitter which will

guarantee out-of-spec emissions. The 2N5109 Q8 driver and MRF-476 Q9 PA final operate pretty close to their limits. This should be no problem for CW, but would likely be fatal for RTTY/packet at full power. This would be true for any rig running 4-5 watts from a single MRF-476.

#### LAB TEST PROCEDURES

The MFJ 9030 and 9040 were tested using test equipment here at the radio telescope (VLA/VLBA in Socorro, NM). Our spectrum analyzers and power meters are intended for use above 1GHz. The power heads and plug-ins used for 7 and 10 MHz are of unknown calibration, but likely very close. Also, the minimum detectable signal strength measurements may be in error on the HIGH side, as below the levels cited, I believe I was picking up stray radiation from the signal generator, as around -90dBm, further reductions caused no further reduction in audio output. Our Bird wattmeter was not available; when it is returned, I will recheck RF out vs. input power for a more accurate measurement and post corrections if necessary.

#### RECEIVER SECTION

1. L3 VFO CAL is very touchy! 1/2 turn=50 kHz on 40M, ~100 kHz on 30M.
2. Tweaking the RF-IF cans by sound off a weak signal is a very good way to optimize the IF's for best gain and noise figure. Monitoring AGC voltage can be a bit better for the actual peak. Recommend using an Amtor/RTTY sig for a more constant sig level/AGC voltage. The difference of this method vs. a spectrum analyzer is a mere dB or two.
3. T1, the first IF can after the U1 NE602, has the most profound effect on images. If you're having images, birdies or excessive noise floor, adjust T1 for peak, then back off a bit to reduce noise. This will scarcely effect IF gain, but images and noise drop 10dB in <1/4 turn.
4. BFO adjustment C67 is also very touchy (although only effects detected CW tone, not the VFO frequency). Use insulated screw driver.
5. In the lab tests, note the AGC voltage vs. the gain reduction produced. In my opinion, the gain reduction is too high for weak signal reception (typical QRP work!). Try setting AGC V. (TP2) to 3.6 or even less with no signal for enhanced weak signal gain. If you're using the CW filter, this will also give a better sounding sidetone. Play with it for your taste. There is nothing sacred about the AGC voltage. It is strictly for operator convenience. A lower setting will make it a bit prone to strong signal overloading, however.

#### TRANSMITTER SECTION

1. VFO DRIVE R41. MFJ manual says don't exceed drive past the output power plateau or else spurious emissions may occur. An UNDERSTATEMENT. It gets so ugly on a spectrum analyzer, I haven't the words to describe it. You CAN judge by the sound of the sidetone ... when it starts to hum a bit, your 2nd and 3rd harmonics are coming up. When sidetone gets raspy, you are generating hash from DC to light and the MRF-476 is in VHF oscillation. The point where the sidetone just leaves that pure sound is maximum power with the cleanest output and the most reduced harmonics.

2. Peaking the TX1 and TX2 cans (L6 and L7) is very important. These are the filters coming out of the TX VFO Mixer NE602, before the Q7 buffer. Adjust for peak output on RF meter. While peak on L7 may seem a bit sluggish, exact peak has lowest harmonic power and provides proper signal level and bias to drive Q8. Don't hesitate to peak these TX cans. Lowest harmonic content occurs when these are peaked.
3. TX OFFSET C66 is very touchy. This is what determines your TRANSMIT frequency by mixing the VFO from the RX with the TX offset freq. Obey the proper sequence in the MFJ manual for the order in adjusting the VFO CAL, TX OFFSET and BFO for proper TX-RX offsets. HINT: If you can get the TX offset for exactly 700 Hz shift, then adjusting the BFO for the 700 Hz sidetone is easily done just by sound.

#### CLOSING THOUGHTS/TECH NOTES

1. In my opinion, I think the source of drift and instability in the MFJ operating frequency is due to L3, VFO CAL variable inductor. It is very touchy. A lower inductance/higher capacitance ratio to determine the NE602 oscillator frequency is needed. However, I have yet to study the NE602 specs, for which the ratio selected by MFJ may be optimal. Other ratios may introduce other problems. Using isolated heating and cooling tests I found L3 to be more sensitive to temperature changes than the other frequency determining components. The RIT varactor also seemed a bit sensitive to temp. Will have to play with this some other weekend! Also need to confirm these findings before tearing up the circuit.
2. I destroyed the Q7 2N5486 FET transmitter buffer (for reasons I won't elaborate!). The old junk-box standard, MPF-102 FET, worked just fine and would probably be a suitable replacement for any of the 2N5486's.
3. The Omniron relay used for the T-R switching is rated for 100,000 actuations. This means if you set minimum delay for almost QSK operation, you could burn out that relay by exceeding its actuation limit. It is available from Digi-Key for about \$5. Another next project is to make a simple-modifiable QSK circuit for the MFJ. Again ... another weekend.
4. If you take your MFJ apart ... make sure when you bolt down the MRF-476 PA, you get it good and tight for maximum heat transfer. It does get hot. Also, don't loose the mica insulator (no part of Q9 should be touching ground). Q8 driver 2N5109 also can get quite warm with active use. My 9040 had a heat sink on Q8 and ran cool, but my 9030 did not and ran hot to the touch. Added a heat sink for precaution.

Hope the information and comments help. Of course, your mileage may differ. These are fun rigs, work well, and easy to modify, play with and learn some electronics. How can anyone not enjoy QRP? Always interested in your comments or your own measurements/observations.

72/73 and hope to work you on the air,  
Paul NA5N (pharden@nrao.edu)

From owner-qrp-l@netcom.com Thu Feb 16 05:13:36 1995  
 Message-Id: <199502160021.AA20130@zia.aoc.nrao.edu>  
 Date: Wed, 15 Feb 1995 17:21:20 -0700  
 From: Paul Harden <pharden@aoc.nrao.edu>  
 Subject: MFJ/QRP Rig Block Diagram

BLOCK DIAGRAM OF MFJ 90xx SERIES 5W QRP TRANSCEIVERS  
 (Typical configuration of many QRP rigs using the NE602's)  
 Used for lab measurement discussion in separate file

```

*****U1*****  Y1-Y4  Q10  **U2*****  **U3*****  U4
RX ant  * NE602 *   4-pole  2N5486 * MC1350 *   * NE602 *   CW  LM386
in---->--* Mixer *----> XTAL -->FET-->* IF AMP *-->* P.Det.*-->FIL--Audio
*****          filter  IF amp *****          *****          Ampl
      |                                     |               |
RX VFO--->|<--RIT Ckt.                     |<--AGC line |<--BFO osc |
      |                                     | (amplified) |
      Q1 FET                               -----]<--AGC det-----|
      VFO Buffer
      |   **U5*****  Q7      Q8      Q9
      |--->* NE602 *   2N5486  2N5109  MRF-476          TX
TX Offset----->* Mixer *---->Bfr---->Driver---->PA Final--->FL---->ANT
XTAL Osc.          *****
  
```

NOTES: Q10 FET IF ampl. on newer units only  
 Power, TX-RX offset, sidetone and T-R switching not shown  
 Component designations are MFJ and the same for each band

de NA5N pharden@nrao.edu

From owner-qrp-l@netcom.com Thu Feb 16 01:15:23 1995  
 Message-Id: <199502160022.AA20190@zia.aoc.nrao.edu>  
 Date: Wed, 15 Feb 1995 17:22:47 -0700  
 From: Paul Harden <pharden@aoc.nrao.edu>  
 Subject: MFJ/QRP Rig Lab Measurements



# MFJ 90xx SERIES 5W QRP TRANSCEIVERS

LAB MEASUREMENTS performed by Paul Harden, NA5N 2/1995

Test Equipment used: Tektronix 7603/7L13 Spectrum Analyzer

Tektronix 545 O-scope

HP 8640 Signal Generator & HP 435A Power Meter

Below are specifications as measured in the lab and presented for general interest, circuit analysis or advanced troubleshooting. While values are believed to be correct, I am not responsible for typos or instrumentation errors that may have occurred.

| CURRENT DEMANDS                         | * 9030 * | * 9040 * |
|-----------------------------------------|----------|----------|
| RX - no options installed               | 52 mA    | 52 mA    |
| RX - with CW filter installed           | 57 mA    | 57 mA    |
| RX - with CW filter and Keyer installed | 66 mA    | 66 mA    |
| TX - 13.8v input 3.0W output            | .68 A    | .68 A    |
| from MFJ AC 4.0W output                 | .85 A    | .85 A    |
| Charger adapter 4.5W output             | .95 A    | .95 A    |
| 5.0W output                             | -----    | 1.10 A   |

TX current is total current consumed during transmit (incl. RX current)

| RECEIVER SPECS                                           | * 9030 *       | * 9040 *      |
|----------------------------------------------------------|----------------|---------------|
| (With -60dBm input signal applied for approx. S6 signal) |                |               |
| LO freq.                                                 | 4 MHz          | 5 MHz         |
| IF freq.                                                 | 6 MHz          | 12 MHz        |
| Frequency range                                          | 10.100-10.150  | 7.000-7.150   |
| Test Frequency used                                      | 10.116 MHz     | 7.040 MHz     |
| LO injection power (U1-7)                                | - 6dBm (250uW) | + 8dBm (6mW)  |
| LO 2nd harmonic power (U1-7)                             | -30dBm (1uW)   | -16dBm (25uW) |
| 4-pole XTAL filter loss                                  | ~3dB           | ~3dB          |
| FET out/U2 IF amp input power (U2-4)                     | -25dBm         | -34dBm        |
| MC1350 IF ampl. output power (U2-1)                      | - 6dBm (250uW) | + 6dBm (4mW)  |
| (=U3 NE602 Prod. det. input power)                       |                |               |
| BFO frequency on product det. (U3-7)                     | 6 MHz          | 12 MHz        |
| BFO injection power (U3-7)                               | - 4dBm (398uW) | 0dBm (1mW)    |
| Gain of U1 NE602 mixer                                   | 12dB           | 15dB          |
| Gain of U2 MC1350 IF amplifier                           | 42dB           | 51dB (+FET)   |
| Gain of U3 NE602 last IF/prod. det.                      | 9dB            | 9dB           |
| TOTAL RECEIVER GAIN (less audio)                         | = 63dB         | = 75dB        |
| >>>Audio gain (forgot to measure!)                       |                |               |

|                           |                   |                |
|---------------------------|-------------------|----------------|
| MINIMUM DETECTABLE SIGNAL | -84dBm (.28uV)    | -87dBm (.20uV) |
|                           | (without FET amp) | (with FET amp) |

>>>(MFJ specs: .35uV or better; this is met even without FET amplifier)

NOTE that +10dB FET ampl only adds 3dB to minimum signal detection, but

does offer improvement in noise floor presented to product detector.

#### RECEIVER AGC ACTIONS

|                          |        |      |       |       |       |          |
|--------------------------|--------|------|-------|-------|-------|----------|
| RX signal input          | -85dBm | -70  | -60   | -50   | -40   | -30dBm   |
| =Approx. S-meter units   |        | S3   | S6    | S9    | S9+10 | Overload |
| AGC Voltage (TP2)        | 4.0v   | 5.1v | 5.7v  | 6.0v  | 6.2v  | 6.35v    |
| U2 Gain reduction caused | 0dB    | -3dB | -10dB | -16dB | -20dB | -24dB    |

#### TRANSMITTER SPECIFICATIONS

|                                     |        |                 |                 |
|-------------------------------------|--------|-----------------|-----------------|
|                                     |        | * 9030 *        | * 9040 *        |
| Output frequency range              |        | 10.100-10.115   | 7.000-7.150 MHz |
| VFO freq. (from RX VFO)             | (U3-1) | 4 MHz           | 5 MHz           |
| TX Oscillator frequency             | (U3-7) | 6 MHz           | 12 MHz          |
|                                     |        | UP convert      | DOWN convert    |
| Output test frequency used          |        | 10.116 MHz      | 7.040 MHz       |
| Output test power used              |        | 4.5 Watts       | 5.0 Watts       |
| TX NE602 mixer LO drive             | (U3-1) | -15dBm (32uW)   | -14dBm (40uW)   |
| Buffer input power 2N5486 (Q7-gate) |        | -17dBm (20uW)   | -25dBm (3uW)    |
| 2nd harmonic power                  |        | -40dBm (0.1uW)  | -28dBm (1.6uW)  |
| Driver input power 2N5109 (Q8-b)    |        | - 4dBm (398uW)  | - 8dBm (158uW)  |
| 2nd harmonic power                  |        | -20dBm (10uW)   | -13dBm (50uW)   |
| PA input power MRF-476 (Q9-b)       |        | +15dBm (32mW)   | +25dBm (316mW)  |
| 2nd harmonic power                  |        | - 7dBm (200uW)  | +20dBm (100mW)  |
| PA output power MRF-476 (Q9-c)      |        | +36.5dBm (4.5W) | +37dBm (5.0W)   |
| 2nd harmonic power                  |        | +14dBm (25mW)   | +24dBm (251mW)  |
| Filter Output (Antenna terminal)    |        |                 |                 |
| Fundamental frequency               |        | +36.5dBm (4.5W) | +37dBm (5.0W)   |
| 2nd harmonic from fundamental       |        | -38 dB          | -34 dB          |
| 3rd harmonic from fundamental       |        | -56 dB          | -57 dB          |
| 4th harmonic from fundamental       |        | -60 dB          | -58 dB          |

>>>harmonics must be -30dB or greater from fundamental.

Harmonic supression easily meets FCC specifications

#### Transmitter stage gains:

|                                     |          |        |
|-------------------------------------|----------|--------|
| Mixer+buffer gain (U3 NE602+Q7 FET) | 13dB     | 17dB   |
| Driver stage gain (Q8 2N5109)       | 19dB     | 33dB   |
| PA final gain (Q9 MRF-476)          | 21.5 dB  | 12dB   |
| TOTAL XMTR STAGE GAINS              | =53.5 dB | =62 dB |
| Check: Output power                 | +36.5dBm | +37dBm |
| -Q7 input power                     | -17 dBm  | -25dBm |
| =Difference                         | =53.5 dB | =62 dB |

Would be interested if any errors are noticed or your own measurements differ from above. I will be submitting drawings of the spectrums to the MFJ Club for some future distribution.

72/73 de Paul NA5N pharden@nrao.edu

From owner-qrp-1@netcom.com Thu Feb 16 14:00:53 1995  
Date: Thu, 16 Feb 1995 10:46:19 -0330 (NST)  
From: Bob Gobrick V01DRB/WA6ERB <bgobrick@terra.nlnet.nf.ca>  
Subject: Re: MFJ/QRP Rig Lab Measurements  
Message-Id: <Pine.OSF.3.91.950216103251.1915A-100000@terra.nlnet.nf.ca>

Paul - thanks for a super series of testing that you did on the MFJ rigs. I hope this is the start of a neat service that you will continue. Can we send you our rigs to get a similar analysis done? What a wonderful way to evaluate the many variations of NE-602 rigs (NN1G, Norcal, NEQRP, OHR etc etc ).

A couple of suggestions on the MFJ Rig Lab Measurements:

1. I think it would be helpful to include the PB Revision number (need to open case and check pc board) of the units you are evaluating. As you may know MFJ is up to a revision 5A board and along with that they have made changes to the unit that effect gain distribution (if and af stages in particular). Not all MFJ units are equal - if you own an older board and would like to "tweak" it then getting info from the MFJ Nineties newsletter, QQ, etc would be of interest.

2. What was the 10db FET IF amp that you were talking about? Is this an MFJ addition? I remember at Dayton last year I saw a post IF amp circuit on a little pc board that I heard MFJ was going to add. What became of that? What I find interesting is your evaluation included some good info of that FET amp in and out of circuit - helped me make a decision to look into it more.

Anyway Paul - an excellent bit of work - thanks and this info will help add to the wealth of info coming from the QRP-L - I hope you are considering submitting this to ARCI for publication. Looking forward to the follow up series on adjustments and block diagram.

Good luck and 72 Bob V01DRB/WA6ERB

-----  
Robert J Gobrick V01DRB/WA6ERB

Internet: bgobrick@terra.nlnet.nf.ca  
rgobrick@public.compuserve.com

Compuserve: 70466.1405@compuserve.com  
-----

From owner-qrp-1@netcom.com Thu Feb 16 20:28:01 1995  
Message-Id: <9502162049.AA14796@us1rmc.bb.dec.com>  
Date: Thu, 16 Feb 95 15:49:54 EST  
From: Bill Acito 16-Feb-1995 1545 <acito@asdg.enet.dec.com>  
Subject: MRF237 in Norcal 40

Does the MRF237 have reversed pins from the NTE237[?] that comes  
with a Norcal?

I swapped one in last night and it got real hot, real quick,  
in receive. Was it me, or the transistor?

b

kc1gs/qrp qrp-ne #260

. . . . . - I own my own words - . . . . .

Bill Acito  
acito@asdg.enet.dec.com

|d|i|g|i|t|a|l|  
Hudson, MA

From owner-qrp-1@netcom.com Thu Feb 16 18:45:24 1995  
Message-Id: <9502161804.AA18229@interval.interval.com>  
Date: Thu, 16 Feb 1995 10:06:24 -0800  
From: burdick@interval.com (Wayne Burdick)  
Subject: Need HW-8 Manual

Hi all,

Wes, WA2CRQ (Redwood City, CA) needs to borrow an HW-8 manual. He'd like  
to make a copy of it. If you have such, please let me know.

Wayne,  
N6KR

P.S. -- I'm speaking at the San Carlos club tonight at 7:00PM; one and all  
are invited. Especially if you have an HW-8 manual :)

From owner-qrp-1@netcom.com Thu Feb 16 11:23:36 1995  
From: JEVERHART@cayman.VF.MMC.COM  
Date: Thu, 16 Feb 1995 10:10:56 -0500 (EST)  
Message-Id: <950216101056.22436596@carib.vf.mmc.com>  
Subject: NEQRP Better VX0/79'er Sprint

Gang,

Just a couple of reminders here:

1. Don't forget the Better VX0 Contest at the NEQRP meeting this Saturday at ARRL HQ. Bring your rubbery rocks!
2. PLEASE try to make the 79'er Sprint this evening between 9 and 10 p.m. EST. A couple of other guys made it last week but I didn't hear any of them. I'll be there with my VX0 and ONER transmitter! (Darn, the FOX is on tonight, too.)

72/73,

Joe E. N2CX

From owner-qrp-1@netcom.com Thu Feb 16 13:51:03 1995  
Date: Thu, 16 Feb 1995 12:27:48 -0500  
From: James R Johns <jrj@mbunix.mitre.org>  
Message-Id: <199502161727.MAA07581@mbunix.mitre.org>  
Subject: NEQRP Meeting

Has anyone set a 2 Meter frequency for technical discussions and talk-in while driving around the Newington, CT area for the Saturday NEQRP meeting?

Jim Johns KA0IQT  
jrjohns@mitre.org

From owner-qrp-1@netcom.com Thu Feb 16 20:36:25 1995  
Message-Id: <9502162022.AA12912@us1rmc.bb.dec.com>  
Date: Thu, 16 Feb 95 15:22:46 EST  
From: Bill Acito 16-Feb-1995 1520 <acito@asdg.enet.dec.com>  
Subject: re: NEQRP Meeting

Jim Johns KA0IQT wrote...  
|Has anyone set a 2 Meter frequency for technical discussions  
|and talk-in while driving around the Newington, CT area  
|for the Saturday NEQRP meeting?

Haven't heard of any. Let me know what you hear.

I have directions to ARRL headquarters if  
anyone needs them. Send mail.

b

kc1gs/qrp qrp-ne #260

. . . . . - I own my own words - . . . . .

Bill Acito  
acito@asdg.enet.dec.com

|d|i|g|i|t|a|l|  
Hudson, MA

From owner-qrp-1@netcom.com Thu Feb 16 09:23:31 1995  
Date: Wed, 15 Feb 95 13:06:54 -0500  
From: djwang@happy.biophys.upenn.edu (DJ Wang)  
Message-Id: <9502151806.AA08916@happy.biophys.upenn.edu>  
Subject: NN1G MKII works!

Now I am a true believer in QRP. Have a nice QSO with someone in Biloxi,  
Mississippi last Saturday. That must be close to 1000 miles from my home QTH  
here in Haddonfield, NJ. I was running 1W (40Vp-p on my TEK 453 scope).

I had better luck since I move up from the ADV/GEN segment to the Novice one-  
seems like I am too slow for those folks in ADV/GEN portions. I will practice  
more on the Novice segment before I move back to lower side of 40m band.

Can some one enlighten me about the record for miles/watt on 40 and 20 meter  
bands.

0.73 (100W/1W)

D.J., N2YKP

From owner-qrp-1@netcom.com Thu Feb 16 07:19:56 1995  
Message-Id: <2f4208b6.pandora@pandora.uucp>  
Date: Wed, 15 Feb 1995 21:59:17 +0800  
From: "W. Daniel, 9V1ZV" <pandora!daniel>  
Subject: Ordering a Bencher

Hi Gang,

From the thread on paddles recently, I've decided to go for a bencher. Can anyone here tell me how to go about ordering one? How much it costs? And even possibly help me in procuring the paddle? Thanks.

73 de 9V1ZV Daniel

--

```
+-----+-----+
| Daniel Wee | daniel%pandora@lugs.po.my |
| 9V1ZV      | daniel.wee@f516.n600.z6.fidonet.org |
| UUCP1.12j  | Packet: 9V1ZV @ 9V1VS.SGP.AS -- |
+-----+-----+
```

From owner-qrp-1@netcom.com Thu Feb 16 20:21:15 1995

Date: Thu, 16 Feb 1995 17:37:20 -0500 (EST)

From: CEBIK@utkvx.utk.edu

Subject: Publications FAQ: still need a bit of help

Message-Id: <Pine.3.89.9502161725.A541705271-0100000@utkvx.utk.edu>

I have compiled information on most of the publications from QRP groups and of interest to QRPers. However, two significant gaps.

NORCAL's QRPP: need a description of the usual contents, average # of pages per issue, and physical size (QQ-size? SPRAT-size? other?)

New England club's publication: need all data: official name, cost/yr, issues/yr, pages/issue, physical size, basis of obtaining (membership? subscription?), subscription-taking person's name and address, 6-8 lines describing contents (average mix over a year), any special notes (non-US prices, special agents, etc.)

Any help will be appreciated, but the closer to "official," the better for accuracy.

Many thanks in advance.

-73-

LB, W4RNL

From owner-qrp-1@netcom.com Thu Feb 16 04:37:42 1995

Date: Wed, 15 Feb 1995 22:23:33 -48000

From: "David D. Meacham" <ddm@datatamers.com>

Subject: Re: QRP Plus & All That Stuff

Message-Id: <Pine.3.89.9502152244.A29158-0100000@dt1.datatamers.com>

Larry, I agree with you completely! I'm tired of it, too.

72, Dave, W6EMD

From owner-qrp-1@netcom.com Thu Feb 16 20:26:22 1995  
Message-Id: <MAILQUEUE-101.950216104424.480@rcadmin.nov.add.bnl.gov>  
From: "Nick Franco - KF2PH" <NICKF@rcadmin.nov.add.bnl.gov>  
Date: Thu, 16 Feb 1995 10:44:24 EDT  
Subject: QRP to C6AHE

Well...I tuned to HW-8 on a good dummy load and a scope to get about one watt out on 20M. Then I brought my travel station to the shack here at work and hooked up to the "R5" mounted on the chimney on the two story building. I tuned up to a dummy load then trimmed the "R5" through the tuner and start scanning the lower end of 20M.

I heard a small pile up on 14.014 (I listened on the TS830S to get a more accurate freq. reading). I threw my call out a couple of times with /QRP and BINGO. I gave his RST and added, IN NY AT 1W. I almost couldn't believe it... a 579 FB ON 1W HI HI from the operator. That made my afternoon. Probably not a big deal to you veterans, but I have only made two other DX contacts QRP. One to OK1 while mobile with the HW-8 on the Long Island Expressway and IK2 from my driveway.

I hope these little reports are not too boring to you all. I've been reading soooooo much about the QRP+ lately, I figured I'd post something from the operational standpoint, Hi.

72  
Nick/KF2PH

PS - I would like to join NE-QRP group I think. I only have old 72 Newsletters. Is the application in the old ones still valid now??

Nick Franco - RHIC Computer/Network Support  
tel:(516)282-5467 fax:(516)282-3674  
kf2ph@bnl.gov or nickf@bnl.gov

From owner-qrp-1@netcom.com Thu Feb 16 09:51:30 1995  
From: Byron8LCZ@aol.com  
Date: Thu, 16 Feb 1995 02:15:42 -0500  
Message-Id: <950215194724\_22634122@aol.com>  
Subject: QRP+

there is NO built in SWR feature for the meter, but if the SWR is high, you will get less power out. It may not be obvious unless the SWR is above 2:1

When you change bands the power level can go up or down depending on how good a match your antenna is on each band. I've noticed on 15 meters, my power goes down a watt, but the match on 15 is not good right now, and i'm



not going on the roof to fix it either ! (I live in Michigan, and its c c c cold down here)

I use a Oak Hills QRP watt meter mostly for QRPp or a Diawa lighted cross needle SWR/watt meter with 150 and 15 watt scales. Its a Real nice meter, easy to read and small enough to take anywhere.

The Diawa is much smaller than the oak hills and has marks for 1 thru 15 watts in 1 watt increments. The face is black with white lettering, the lighted are mounted in the upper left and upper right corners. the numbers seem to light up, really well.

72, Byron WA8LCZ

From owner-qrp-l@netcom.com Thu Feb 16 01:15:17 1995  
Date: Wed, 15 Feb 95 9:04:56 EST  
From: Mark Widrick ASQB-SED-TR x5472 <WIDRICKM@ritchie-emh1.army.mil>  
Subject: QRP+ Information  
Message-Id: <9502150909.aa28823@wharf.arl.mil>

Like several others, I'd like some information on the QRP+ that there's been so much traffic on.

I'm not a QRPer yet. I just got back on HF about 2 weeks ago after a couple of years absence (my dad confiscated my TS440 when he got his general licence - HI). It sounds like QRP would be fun - once I learned the code again!!

I appreciate what I've read on the list so far. Thanks to whoever maintains it.

Thanx in advance for the replies.

Mark Widrick, KB2IVB  
email: widrickm@ritchie-emh1.army.mil

From owner-qrp-l@netcom.com Thu Feb 16 05:12:52 1995  
From: "Greg Taylor" <GTAYLOR@TAEX003N.tamu.edu>  
Date: Wed, 15 Feb 1995 20:18:16 CDT  
Subject: Re: QRP+...Let's not screw it up  
Message-Id: <C493F17A7@taex003n.tamu.edu>

C'mon guys...Jeff has done us all a service by taking this group purchase on and negotiating a discount. I can understand that Index would only want to deal with one person, to conserve the integrity of the group.

If someone wants to send everything right to Index, fine...just pay the

full price for it. Bickering only tends to slow things down.

Hear Hear!

Greg, KD4HZ

From owner-qrp-l@netcom.com Thu Feb 16 20:41:51 1995  
Date: Thu, 16 Feb 1995 17:01:43 -0800  
From: faunt@netcom.com (Doug Faunt N6TQS 510-655-8604)  
Message-Id: <199502170101.RAA18158@netcom4.netcom.com>  
Subject: Radio Shack temperature compensation

I needed some regular disc caps, and keeping in mind Jeff's suggestion of the Radio Shack assortment, I picked up one that I could see had the caps I wanted, just to see if there were caps that could be useful for this.

Jeff seems to be right in this case, although one wonders if these are actually as marked. In that one assortment, I found:

2 75pf N750  
5 100pf N750  
12 68pf N1500

Not bad.

73, doug

From owner-qrp-l@netcom.com Thu Feb 16 09:19:44 1995  
Date: Wed, 15 Feb 1995 10:13:39 -0800  
From: Joe Gervais <jgervais@weber.ucsd.edu>  
Message-Id: <199502151813.KAA14685@weber.ucsd.edu>  
Subject: Re: Sierra is Working

Bill (KC1GS) wrote:

> Much better idea... a converter/step-up configuration so you can  
> install some of those nifty purple neon lights I see on the  
> bottom of cars... that, plus the 'California' paint job I heard  
> suggested last week... :-)

Is it just me, or is this getting \*really\* scary...? :)

-Joe, KD6PRD, Contemplating how to fit a black velvet  
painting of Elvis onto my NorCal-40a...

From owner-qrp-l@netcom.com Thu Feb 16 01:15:26 1995  
Date: Wed, 15 Feb 1995 08:56:00 -0600 (CST)  
From: Jeff Gold <JMG@tntech.edu>

Subject: sorry, hopefully final QRP+  
Message-Id: <01HN2MEV0LFMCZ1V3D@tntech.edu>

All,

if everyone who says they are definite, is .. we have over 20 orders.

it seems the list takes over 24 hours to reflect my messages, so sorry about delays.

PLEASE fill out the email form..even if you have previously emailed me info. .I need to get all the information together in a standard form... I don't do this for a living and I am not getting anything extra from this.. so need to look for easier ways to handle all this paper work.

As far as the deal goes I am to send in all checks and charge info together.. if someone wants to send direct, they better check with Index Labs and get the ok, and post to the group and inform me of this, or it won't be part of this order. I am not for hastling Bruce.

so as far as I can tell the price is:

|         |       |
|---------|-------|
| rig     | \$510 |
| Mike    | \$ 28 |
| US ship | \$ 10 |

\*if you want mike and rig.. and everyone told me the truth about ordering:

package of rig+mike+shipping \$530

my day phone is (615)372-3900\*local time from 8-9:30 usually best

Home phone (615)526-8589.. DON'T call after 9pm,

Jeff M. Gold  
1751 Dry Creek Rd.  
Cookeville, TN 38501

73,72

Jeff, AC4HF

From owner-qrp-1@netcom.com Thu Feb 16 16:28:11 1995

Message-Id: <MAILQUEUE-101.950216115413.320@rics1.cba.uh.edu>  
From: "Dave Jenkins" <DJENKINS@rics1.cba.uh.edu>  
Date: 16 Feb 95 11:54:13 CST  
Subject: SSB fox hunt

I don't know how many hunters were out last night - you couldn't hear  
\*any\* of them in Kenney, TX. I tried all segments, and failed to  
hear hunter or huntee. Darn.

I \*did\* hear VA3MG (Marcel) talk briefly to a QRP station, and I  
thought the op said "Steve" - was that you, Steve Modena?

Anyway, that's ancient history now - onward to nab the wily CW fox...

From owner-qrp-l@netcom.com Thu Feb 16 18:57:18 1995  
From: Bob\_White@ccmail.aerosys.loral.com  
Date: Thu, 16 Feb 95 14:10:07 EST  
Message-Id: <9501167929.AA792972607@ccmail.aerosys.loral.com>  
Subject: SSB Fox Hunt

Well I finally showed up on the right night for a Fox Hunt. Or did I?  
40 meters sounded more like a foreign broadcast SWL party! I did  
learn one thing if I ever take a turn at being the SSB Fox I will use  
the TS-940S with its SSB slope filters for receive. The Jones filter  
is nice on the Scout, but was not up to the job in that mess. No joy  
on 40 tonight nair a QRP one.

80 looked much more promising on the first session...found Steve AB4EL  
in NC holding down the fort on 3784 at about 0239Z and Kirt AA4YZ from  
OH soon joined in to make it at least a threesome on the freq. I  
could have sworn that there was a aa2?? in there calling but could not  
quite pull him out. I should have put the DSP unit in line for the  
hunt. It sure is a lot harder QRP to QRP SSB then QRP to QRP CW when  
the bands are crowded. Moved up the band for the last  
session...there's the FOX....Ed KF8EE in OH....nailed him and moved on  
to alert the guys. Found AB4EL holding down the fort again...broke in  
and pointed him in the right direction. Heard the Fox calling Jim  
KC1FB in CT but he didn't seem to be hearing the Fox...broke in to  
tell Jim the Fox was on freq....spend the rest of the session  
listening to Bill N1QPR in Mass and the Fox play cat and mouse with  
each other.....Bill was 55 here in MD most of the session, but when I  
called him at the end of the run to get a report he was down in the  
mud....switched to the G5RV from the 160 meter sky loop and was just  
able to hear Bill at 33. Not a bad night considering the conditions.

AB4EL NC 55/55  
AA4YZ OH 44/55

KF8EE OH 55/56 FOX  
KC1FB CT 55/53  
N1QPR MA 33/44

Equip: Ten Tec Scout modified (bypassed RF amp) to run 4 watts off a 2.5 amp PS. 160 meter full wave sky loop at 55 ft/G5RV at 50 ft.

Bring on the CW!!

See ya all tonight.

72/73 Bob White W03B  
bob\_white@ccmail.aerosys.loral.com

From owner-qrp-l@netcom.com Thu Feb 16 02:54:28 1995  
Date: Wed, 15 Feb 1995 22:17:17 -0800  
From: faunt@netcom.com (Doug Faunt N6TQS 510-655-8604)  
Message-Id: <199502160617.WAA28260@netcom8.netcom.com>  
Subject: Re: Stick on Printed Circuit materials

I used them a lot, MANY years ago. I actually used them for components, and hand wired the connections. The 16 pin DIP pieces had a power bus, and that helped a lot. This was fairly low speed TTL circuits.

73, doug

From owner-qrp-l@netcom.com Thu Feb 16 11:59:18 1995  
Date: Thu, 16 Feb 1995 07:53:58 -0800  
From: dgf@netcom.com (David Feldman)  
Message-Id: <199502161553.HAA10196@netcom14.netcom.com>  
Subject: Thanks for PM articles & mods!

Thanks very much to the several people that sent copies of the Power-Mite related articles. The help is greatly appreciated!  
My mutant PM3A is now much easier to comprehend...

73 Dave WB0GAZ dgf@netcom.com

From owner-qrp-l@netcom.com Thu Feb 16 09:01:25 1995  
Date: Thu, 16 Feb 1995 11:00:56 +0200  
From: Kein{nen Paul <k23690@proffa.cc.tut.fi>  
Message-Id: <199502160900.LAA07610@proffa.cc.tut.fi>  
Subject: Re: The BNC vs. UHF connector

IMHO, the connector type should be selected based on the cable type used. For RG-58 the most appropriate selection is the BNC (or TNC for higher frequencies) and for RG-174 a good choice would be SMA. For heavier

cables, such as RG-213 (if you can find BNC connectors for it), the torque of the heavy cable will cause problems with the BNC connector. For heavy cables the N or UHF connector is more rugged.

Even if thick cables are used in the antenna feed lines, bring the thick cable into the ham shack and terminate the cable into a fixed patch panel with N or UHF connector and use N/UHF to BNC patch cord made of RG-58 to connect to the equipment (power level and band permitting).

Stuart K5KVH ("rohre" <rohre@msmailgw1.arlut.utexas.edu> ) wrote:

> Guess what? Type BNC is constant impedance even in crimped versions, (or  
> maybe better, depending on your assembly skills with the old solder ones), it  
> is good to up to 4 GHz, and the working voltage is also 500, and dielectric  
> withstanding voltage is also 1500 volts!

Some manufacturers specify their BNC only to 1 GHz. At frequencies above about 1 GHz, the ground connection becomes more and more unreliable after repeated connects/disconnects, but at lower frequencies I haven't experienced any problems with BNCs.

> Now, tell me what is becoming the most seen coax connector? Type TNC! It is  
> used on all cellular phones, and is similar to the BNC, but screws on and is  
> mechanically better for mobile environments. It is good up to 11 GHz, and  
> also has 500 working volts rating, and 1500 volts dielectric withstanding  
> rating. As their usage goes up, the prices will come down, and surplus has  
> become available.

The TNC is much more reliable above 1 GHz due to a much more solid ground connection than the BNC. In my experience, TNCs work fine at 1.3 GHz, but the problem is the losses of the thin cable, if it is longer than a meter or so.

> Now, like Mike, I think the BNC are fine, and get them as castoffs from  
> industrial equipment or military surplus at little or no cost. In theory a  
> matched kilowatt rig could run on the BNC with the ICAS ratings, ie non  
> constant duty, ( not long winded). For those that are leery of that try the  
> SHV. It is sized close to BNC, but is rated at 5000 volts working DC and AC  
> dielectric withstanding voltage, and is bayonet like the BNC.

Running 1 kW into 50 ohms is about 220 V and 4.5 A (rms) and much more at unmatched conditions. This is quite a lot of current for the flimsy ground connection of the BNC. The TNC is much better in this respect. And a word of warning, do not attempt to run a kilowatt through a BNC/TNC patch cord made of RG-58, the cable will melt almost instantly in the UHF-bands :-).

If you are running only low-band HF QRP, I don't see why you would want to

use anything else than RG-58 and BNCs.

Paul OH3LWR

--

|           |                                              |                            |
|-----------|----------------------------------------------|----------------------------|
| Phone     | : +358-31-213 3657                           | Mail: Hameenpuisto 42 A 26 |
| Internet: | Paul.Keinanen@cc.tut.fi                      | FIN-33200 TAMPERE          |
| Telex     | : 58-100 1825 (ATTN: Keinanen Paul)          | FINLAND                    |
| X.400     | : G=Paul S=Keinanen O=Kotiposti A=ELISA C=FI |                            |

From owner-qrp-l@netcom.com Thu Feb 16 15:02:22 1995  
Date: Thu, 16 Feb 95 10:49:11 PST  
From: Kevin.Normoyle@Eng.Sun.COM (Kevin Normoyle)  
Message-Id: <9502161849.AA12197@gluon.Eng.Sun.COM>  
Subject: Re: The BNC vs. UHF connector

Someone mentioned high cost re BNC connectors.

Consulting an Allied catalog, I noticed Amphenol has a "RFX" line of commercial BNC connectors (50 ohms DC-4GHz) that seem relatively inexpensive.

clamp outer, solder inner  
\$1.73 or \$2.12 (rg 58, 59)  
(Bomar has the same for \$2.05)

(crimp-on or twist-on are a little cheaper)

panel-mount connectors  
\$1.49 or \$2.34 for non-isolated  
(Bomar has the same for \$1.28 and \$2.02)  
(\$1.00 from Cambridge Products)

other manufacturers (amp, aim, cambridge products) are similar.

In comparison, pl-259 and so-239's are about 50 cents less  
(in this catalog)

From owner-qrp-l@netcom.com Thu Feb 16 04:52:27 1995  
From: AD40D@aol.com  
Date: Wed, 15 Feb 1995 23:12:04 -0500  
Message-Id: <950215223622\_22785205@aol.com>  
Subject: unsubscribe

unsubscribe

From owner-qrp-l@netcom.com Thu Feb 16 09:09:54 1995

From: Edward=F=Burke%Eng%GPID@banyan.BV.TEK.COM  
Message-Id: <9502151831.AA28168@tekgen.bv.tek.com>  
Date: Wed, 15 Feb 95 10:28:09 PST  
Subject: unsubscribe

unsubscribe

From owner-qrp-1@netcom.com Thu Feb 16 14:06:49 1995  
From: wayne\_fretwell@MENTORG.COM (Wayne Fretwell)  
Date: Thu, 16 Feb 1995 05:51:02 -0800  
Message-Id: <9502160551.ZM11936@python>  
Subject: unsubscribe

unsubscribe

From owner-qrp-1@netcom.com Thu Feb 16 17:19:40 1995  
From: LVE1@inel.gov  
Message-Id: <9502161807.AA27956@garnet.inel.gov>  
Date: Thu, 16 Feb 1995 11:08:34 -0700  
Subject: Useful Tools, etc.

Seen a couple of postings regarding useful tools for home construction projects, so I'll add my two (binary) bits worth.

After spending half a life-time using (power) hand drills to make holes in everything from PC boards to fence posts, I "splurged" a few years ago and got a small bench-type drill press. Best tool investment I ever made!! Makes life much simpler -- particularly when combined with a drill vice for holding small pieces, etc. Bench-type drill presses can be obtained from about \$75 to \$250 or more -- although you (generally) get what you pay for, the ones at the lower end of the range are adequate for all but the most high-precision work. The one I got was regularly priced at \$129 and on sale for \$89.

-----  
"Any opinions expressed herein are my own and probably do not agree with those of my employer, the U.S. Government or my spouse"

--... ..--

Larry V. East (W1HUE)  
Idaho Falls, ID  
e-mail: LVE1@inel.gov  
Packet: W1HUE@WT7B.ID.USA.NOAM  
work: (208) 533-4005 home: (208) 529-2162

From owner-qrp-1@netcom.com Thu Feb 16 20:23:10 1995  
Date: Thu, 16 Feb 1995 17:39:51 -0500 (EST)  
From: Aa4xx <aa4xx@nando.net>



Subject: Wanted:Argonaut II

Message-Id: <Pine.SUN.3.90.950216173721.14132D-1000000@merlin.nando.net>

Gang,

Anybody out there interested in turning loose of your Argonaut II?  
Please send description of condx and price. 72,  
Paul AA4XX@nando.net

From owner-qrp-1@netcom.com Thu Feb 16 13:01:48 1995

From: fmitchell@rdcclink.rd.qms.com

Date: Thu, 16 Feb 95 10:14:40 CST

Message-Id: <9501167929.AA792958480@rdcclink.rd.qms.com>

Subject: Re: Who's going to Dayton?

Vibroplex will be at Dayton for the first time in several years!  
I don't know what booth yet, but be sure and look for us...

mitch  
wa4osr

\* The \*FIRST HAM OWNER\* owner of The Vibroplex Co., Inc.!\*

-----  
Felton "Mitch" Mitchell, WA4OSR

E-mail: fmitch@ns1.maf.mobile.al.us first choice  
or fmitch@netcom.com second choice

Smail: 11 Midtown Park, E., Mobile, AL 36606-4141  
334-478-8873 work, 334-342-7259 home 334-476-0465 FAX

Packet: WA4OSR@W4IAX.#MOBAL.AL.USA.NA  
-----

----- Reply Separator -----

Subject: Who's going to Dayton?

Author: PDouglas12@aol.com at smtp1ink-rd

Date: 2/14/95 7:34 PM

Received: by ccmail from sun470.rd.qms.com

>From owner-qrp-1@netcom.com

X-Envelope-From: owner-qrp-1@netcom.com

Received: from imagen.sclara.qms.com (imagen-t1) by sun470.rd.qms.com  
(4.1/SMI-4. 1)  
id AA08998; Tue, 14 Feb 95 19:31:56 CST  
Received: from gatekeeper.imagen.com by imagen.sclara.qms.com (4.1/SMI-4.1)  
id AA05518; Tue, 14 Feb 95 17:33:37 PST  
Received: from netcom6.netcom.com by gatekeeper.imagen.com (4.1/SMI-4.1)  
id AA01165; Tue, 14 Feb 95 17:33:32 PST  
Received: by netcom6.netcom.com (8.6.9/Netcom)  
id OAA23321; Tue, 14 Feb 1995 14:29:29 -0800  
Received: from mail04.mail.aol.com by netcom6.netcom.com (8.6.9/Netcom)  
id OAA23312; Tue, 14 Feb 1995 14:29:26 -0800  
>From: PDouglas12@aol.com  
Received: by mail04.mail.aol.com  
(1.37.109.11/16.2) id AA214830966; Tue, 14 Feb 1995 17:29:26 -0500  
Date: Tue, 14 Feb 1995 17:29:26 -0500  
Message-Id: <950214171009\_21492933@aol.com>  
To: qrp-l@netcom.com  
Subject: Who's going to Dayton?  
Sender: owner-qrp-l@netcom.com  
Precedence: list

Well, I don't know what came over me, but I just committed to go to Dayton  
(not driving after all). Last time was '89, and I am psyched. Any others  
from the list going? I will be at the Marriot, but will get to the QRP  
activities, if I ever find out where they are! Does anyone on the list have  
the QRP activity data (dinners, hospitality suite etc. -- where are they?)  
Sorry to fill the non Dayton-going screens with this, but, respectfully, eat  
your hearts out! 72 and 73 Preston WJ2V

From owner-qrp-l@netcom.com Thu Feb 16 12:18:38 1995  
Date: Thu, 16 Feb 1995 10:06:55 GMT  
From: "FRANK W LEE, G3YCC" <frank@yorks.demon.co.uk>  
Message-Id: <1669@yorks.demon.co.uk>  
Subject: Yes, let's have the Argo 515!

Instead of the ill fated Argo 2, which was always a loser here,  
too dear and average performance, a revamped 515 would be very  
popular, even without any extra bands.  
About the QRP Plus - the actual cost here would be 980 US  
dollars. Don't want one (unless as a free sample!), but just  
thought you guys in US should know how well off you are, compared  
to us over the muddy pond in that respect! In fact ANY US gear is the  
same price in pounds as it is in dollars, i.e with the present exchange rate,  
1.5 times as expensive; someone is making a very nice profit,  
even taking into account import duties etc! Oh well, back  
to the soldering iron, isn't that what qrp is all about,  
using home made gear, with an efficient aerial (antenna to you)

properly adjusted for maximum radiation efficiency.  
Most of all let's ENJOY our hobby, for it is just that,  
a hobby, to be enjoyed as and how you want.  
Any G QRP members may like to know of a new 'box' for  
them:  
email majordomo@insite.parasoft.co.uk (subscribe gqrp-l)

73s

--

Frank G3YCC

From owner-qrp-l@netcom.com Thu Feb 16 22:01:01 1995  
Date: Thu, 16 Feb 1995 20:01:32 -0330 (NST)  
From: Bob Gobrick V01DRB/WA6ERB <bgobrick@terra.nlnet.nf.ca>  
Subject: Re: Yes, let's have the Argo 515!  
Message-Id: <Pine.OSF.3.91.950216195447.17669B-100000@terra.nlnet.nf.ca>

Hi Frank - yes I have always wondered about the high prices in the UK for  
imported

goods - I subscribe to the RSGB Radcom, Practical Wireless and at one  
time Ham Radio Today and have been amazed at the prices. I was  
interesting to see the other day the offer that Index Labs made to  
foreign orders - same price (about \$500 US) plus some more for shipping  
and the buyer had to pay the customs & duties. Now that is where the  
profit comes in - unfortunately it isn't being made by the qrp rig  
manufacturer.

Anyway I enjoyed buying the Kanga kits at Dayton when the guys bring them  
over and the followup sales by Bill N8ET the US Kanga rep makes. One of  
these day free trade will prevail - whatever that means ;-)

72 Bob V01DRB/WA6ERB

On Thu, 16 Feb  
1995, FRANK W LEE, G3YCC wrote:

> Instead of the ill fated Argo 2, which was always a loser here,  
> too dear and average performance, a revamped 515 would be very  
> popular, even without any extra bands.  
> About the QRP Plus - the actual cost here would be 980 US  
> dollars. Don't want one (unless as a free sample!), but just  
> thought you guys in US should know how well off you are, compared  
> to us over the muddy pond in that respect! In fact ANY US gear is the  
> same price in pounds as it is in dollars, i.e with the present exchange rate,  
> 1.5 times as expensive; someone is making a very nice profit,  
> even taking into account import duties etc! Oh well, back  
> to the soldering iron, isn't that what qrp is all about,  
> using home made gear, with an efficient aerial (antenna to you)

> properly adjusted for maximum radiation efficiency.  
> Most of all let's ENJOY our hobby, for it is just that,  
> a hobby, to be enjoyed as and how you want.  
> Any G QRP members may like to know of a new 'box' for  
> them:  
> email majordomo@insite.parasoft.co.uk (subscribe gqrp-l)  
>  
> 73s  
> --  
> Frank G3YCC  
>

-----  
Robert J Gobrick V01DRB/WA6ERB

Internet:       bgobrick@terra.nlnet.nf.ca  
                 rgobrick@public.compusult.nf.ca

Compuserve:     70466.1405@compuserve.com  
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